

O'Hailey: Chapter 4 Bonus Materials

Reusing Animation Data

Have you ever broken the rig while you were animating? Suppose I was animating this arm and realized that the elbow was broken, which is actually the case. I got to version 4 and realized that the elbow was not behaving correctly *and* there was no toon shader on the file. How can you take animation off of one rig and put it on a better version of the rig?

Using Reference Files

Choice number one would be if your rig had been referenced to begin with. Then when you updated the rig file, it would automatically update in the animation. This is great when working in a production pipeline where multiple people are working on the model, rig, and animation. The work can be done in parallel. Here's snapshot of how it is done.

1. Create a model file, save it as MyModel_v1.ma.

Figure 4.IN1

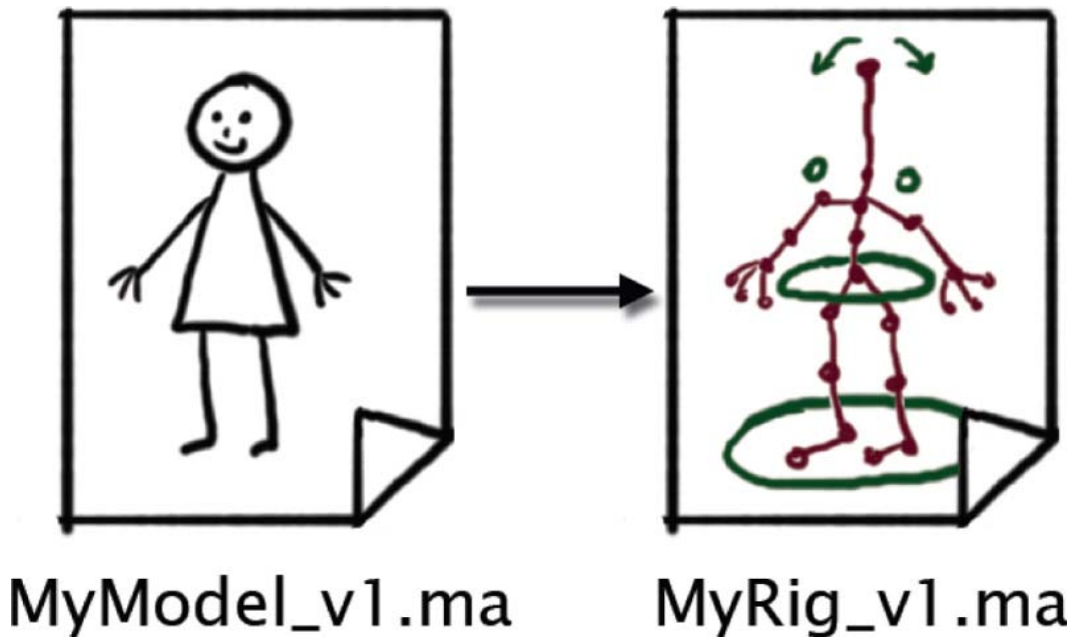


MyModel_v1.ma

MyModel_v1.ma created.

2. Create a rig file and reference in the Mymodel_v1.ma file by clicking **File > Create Reference**. Save your rig file as MyRig_v1.ma. This couples together the two files. When you open MyRig_V1.ma, it also opens MyModel_v1 inside of itself. If any changes happened to Mymodel_v1.ma, then those changes are brought in. Clever, huh?

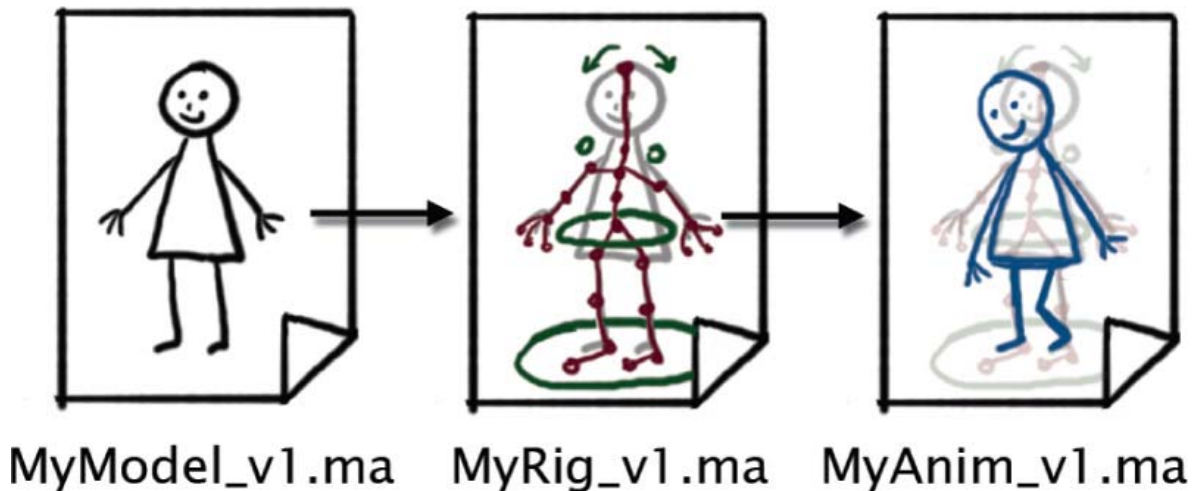
Figure 4.IN2



MyRig_V1 is created and references MyModel_v1.ma.

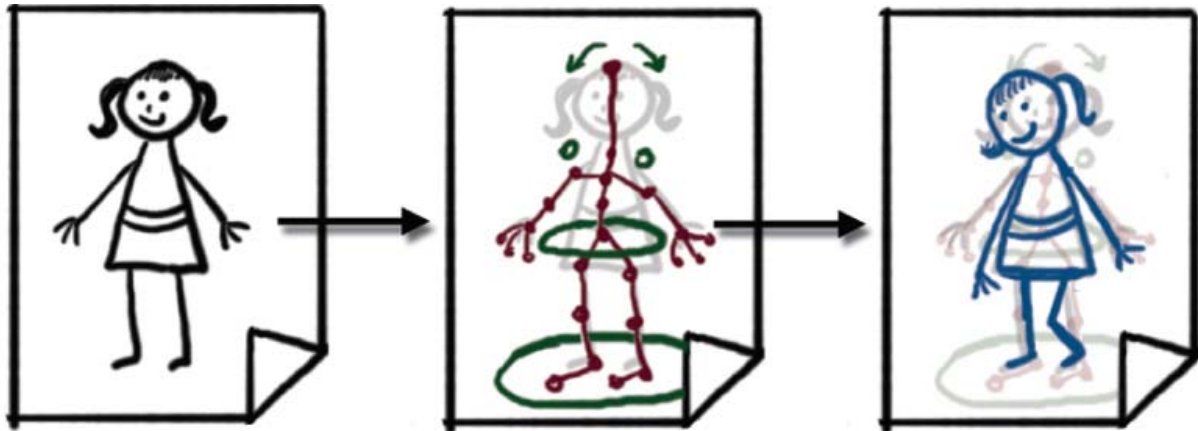
Same thing goes for animation. Animators create their own animation file (MyAnimation_v1.ma) and inside of it create a reference for MyRig_v1 (which is called MyModel_v1). Now you have three files coupled together, and at any given time you can change the reference (**File > Reference Editor > Reference > Replace Reference**) to point to a newer version of the model or rig. Now, that is great for a production pipeline.

Figure 4.IN3



MyAnimation_v1 is created, which references MyRig_V1, which references MyModel_v1.ma.

Figure 4.IN4



MyModel_v2.ma MyRig_v1.ma MyAnim_v1.ma

A change in MyModel_v2 is updated inside the MyAnimation file.

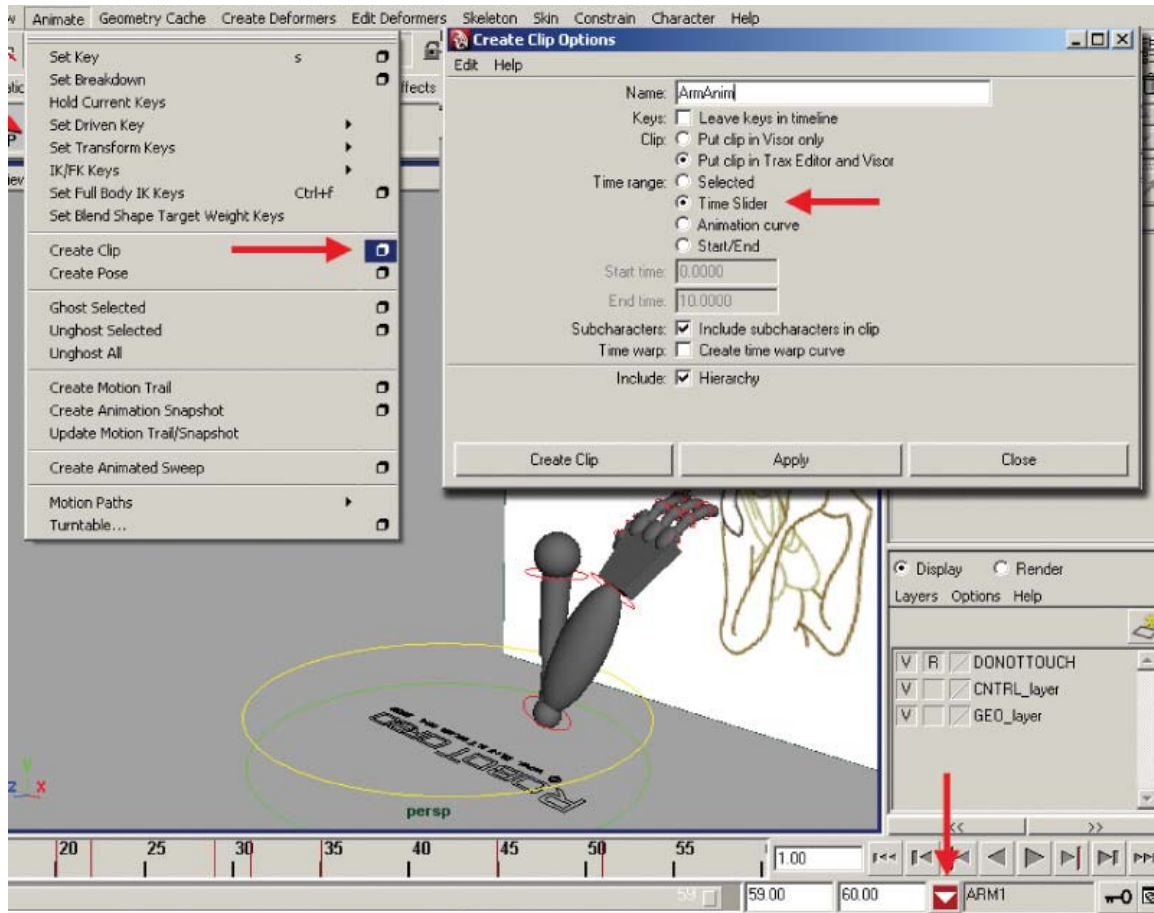
Exporting and Importing Keyframes

Often the case is that you are not working in a production line and you are acting as modeler, rigger, and animator. When this happens, it is easy to forgo the use of references and directly import in models and rigs to your animation file, which is what I have done during the hands-on section of this book. Sometimes you find that you need to update the original model or rig file and want that in your animation file instead. Here are the steps to making that happen.

You have to have a character set for this to work. Make sure that you are in the current character set that you want to export.

Click **Animate > Create Clip** option box. Name the clip and make sure that the correct time range is selected. The default settings are usually fine. This will remove the keyframes from the timeline and put them in the Trax Editor and visor.

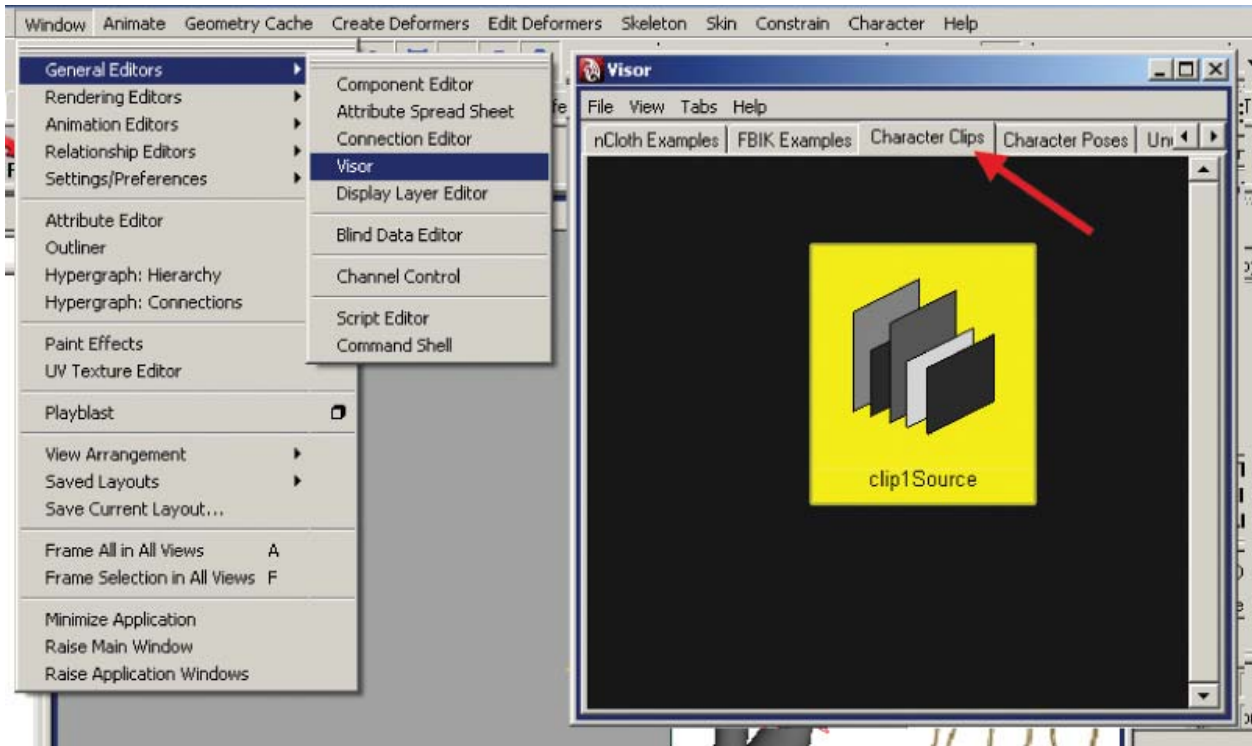
Figure 4.IN5



Creating an animation clip from a current character set.

Open the visor so that you can find the clip and export it. Select **Window > General Editors > Visor** to open the visor window and locate the **Character Clips** tab. You will see an icon for the animation clip you have created. **Right-click** on the clip and select **Export**. This will save a ma file containing just your curves. (You can open it and read it if you dare; let your inner geek shine.)

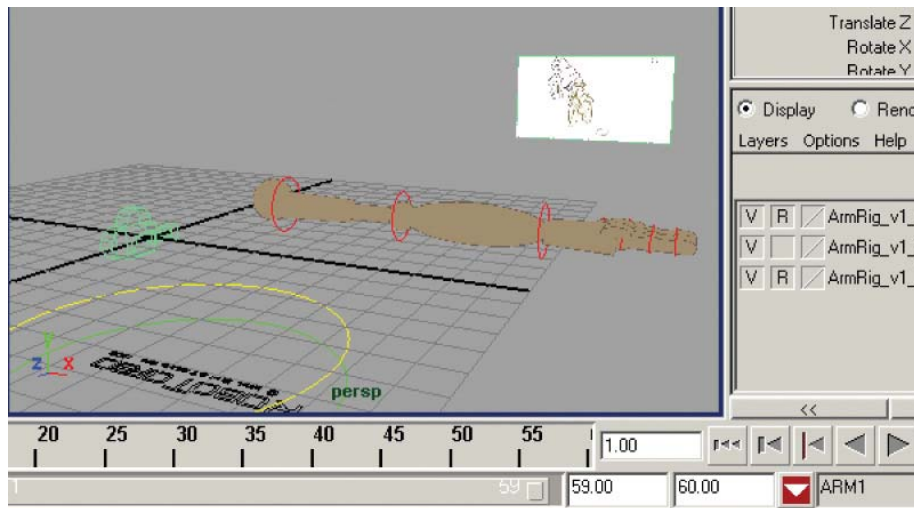
Figure 4.IN6



Opening the **Visor** menu to export the animation curves.

You can now delete the old rig and character set. Then, reimport a fresh new updated version. In my case, I have reimported the new arm (with the toon shader). It has appeared at the origin.

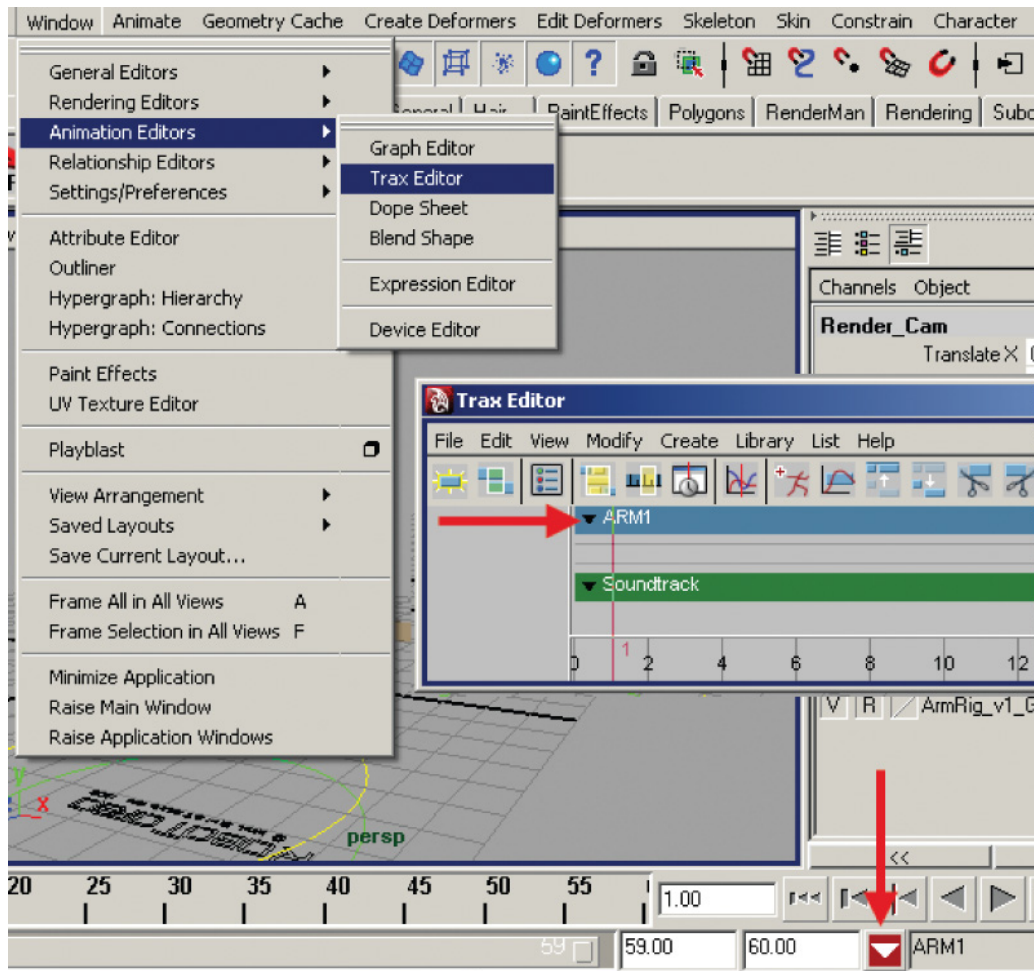
Figure 4.IN7



The new imported rig shows up at the origin. This image shows the Render_Cam pointing at the 2D reference image plane.

To apply the animation to this new rig (which has a character set with the same names that your other rig had), make sure the character set is selected. Open the Trax Editor (**Window > Animation Editors > Trax Editor**).

Figure 4.IN8

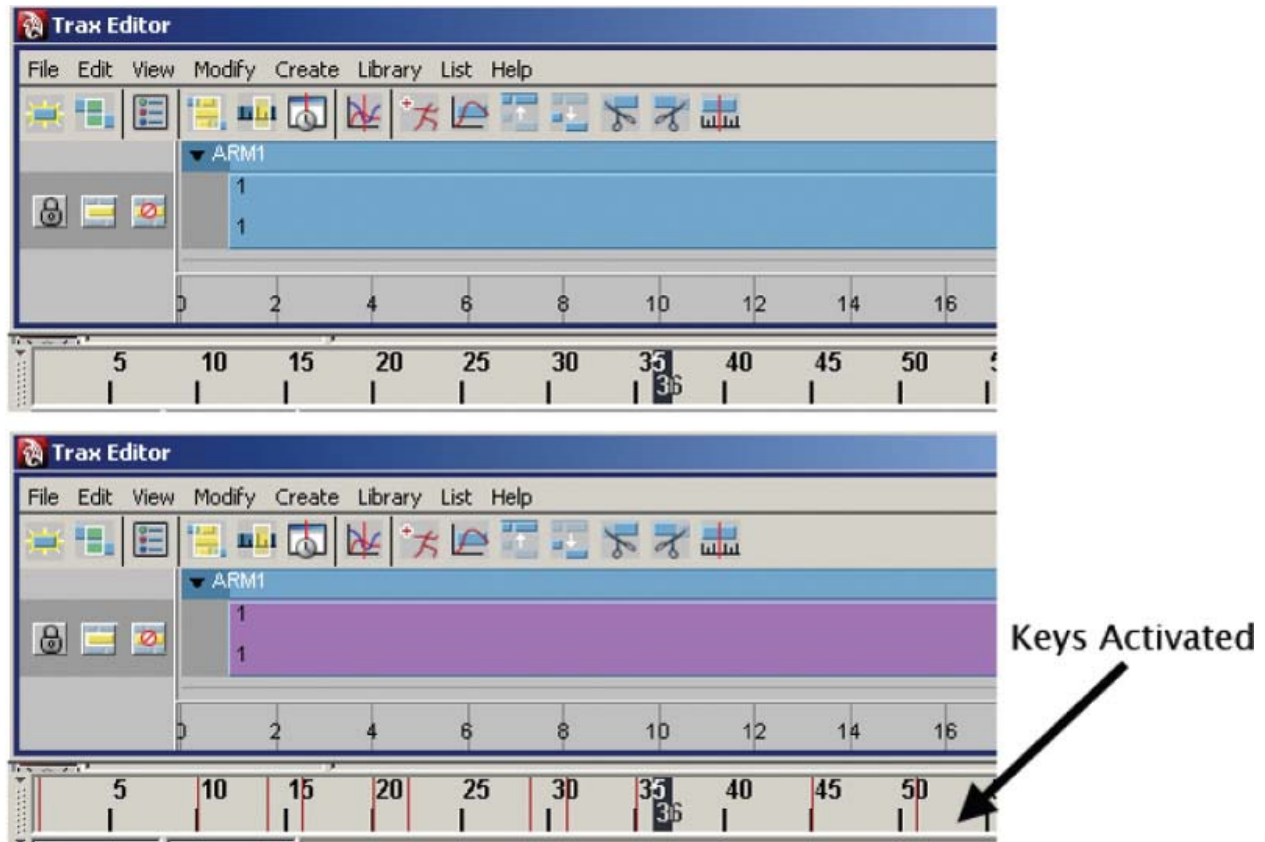


Trax Editor loads in the current character set.

In the Trax Editor, select **File > Import Animation Clip to Characters**. The default setting is fine. Select the animation curves ma file you had saved previously.

In the Trax Editor, you only have to select the clip that it has brought in. It will be blue. Right-click on this blue clip, and select **Activate Keys** to get the keys to show up on the timeline. The clip turns purple when the keys are activated.

Figure 4.IN9



Trax Editor. Right-click on the blue animation clip and activate keys. The clip turns to purple. Keys are now visible in the timeline.

That is all we need the Trax Editor for currently. Close the Trax Editor and resume your animation duties with the updated rig. Problem solved.

Yes, there are scripts out there that do this and probably with fewer clicks, and there is much more to learn in the Trax Editor. I do not use it very much, only for problem solving. You can dig deeper on that subject later on if you need to.

Maya 2009 and 2010 have the added functionality of animation layers, using the same interface as render layers. Oh, there is more to learn there, for sure.